

Work Order ID 135242

August 06, 2015 7:49:44 AM

ACCEPTABLE TO  
SHIP A.P.  
15.08.06  
D2724-042  
B135902  
111-0

\*135242\*

Page 1

Item ID: D2724-042

Revision ID:

Item Name: 206L Step Assembly, RH

Start Date: 8/6/2015 Start Qty: 4.00

Required Date: 8/13/2015 Req'd Qty: 4.00

Reference:

Accept

\*N900040100\*

Setup Start \*NS1\*

Stop \*NS2\*

Cust Item ID:

Customer:

Approvals: Process Plan: SL Date: 1 5 0 8 0 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |
|----------|--------------|
| D2724    | Rev C        |

100 0.00

\*100\*

Large Fab

Large Fab

Memo

0.00

Large Fab

Cut D2724-2 using D2622 extrusion as per Dwg D2724  
Deburr and bevel ends for welding

4 0 BE15-08-10

110 0.00

\*110\*

Large Fab

Large Fab

Memo

0.00

Large Fab

Weld end cap (One End Only) and lugs as per Dwg D2724 using Jig DT10074

A/R AL ROD Batch: m130137/m131562  
Grind end cap welds flush

4 0 BE05-08-12

120 0.00

\*120\*

QC

QC9- Inspect visual per QSI004- Fusion Welds

Memo

0.00

Quality Control

4 15-08-12

DAS

9

9-89





# Work Order ID 135242

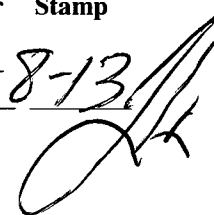
August 06, 2015 7:49:44 AM

**\*135242\***

Page 4

Item ID: D2724-042 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: 206L Step Assembly, RH  
Start Date: 8/6/2015 Start Qty: 4.00 **\*4\*** Cust Item ID:  
Required Date: 8/13/2015 Req'd Qty: 4.00 **\*4\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID                      | Operation<br>Description                                                                                                            | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp                                                                                    |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|---------------------------------------------------------------------------------------------------|
| 190<br><b>*190*</b><br>HandFinish<br>Hand Finishing | Chemical Conversion Coat per QSI005 4.1<br><br>Memo                                                                                 | 0.00<br><br>0.00     |         |        |              | 4             | 0             | 15-8-13          |                |
| 200<br><b>*200*</b><br>Powdercoat<br>Powder Coating | White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum<br>M 131545<br>Memo<br>START TIME: 7:30<br>OVEN TEMPERATURE: 320°<br>FINISH TIME: 8:00 | 0.00<br><br>0.00     |         |        |              | 4             | 0             | 15-8-19          | 3333                                                                                              |
| 210<br><b>*210*</b><br>QC<br>Quality Control        | QC3- Inspect Part Finish<br><br>Memo                                                                                                | 0.00<br><br>0.00     |         |        |              | (4)           |               |                  | <br>15-08-19 |



# Picklist Print

August 06, 2015 7:50:07 AM

Page 1

Work Order ID: 135242

**\*135242\***

Parent Item: D2724-042

**\*D2724-042\***

Parent Item Name: 206L Step Assembly, RH

Start Date: 8/6/2015

Required Date: 8/13/2015

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:E As Per Ecn 766 06-01-06 JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

D2734

Manufactured

No

110

Each

93.0000

1

4

**\*D2734\***

Step End Plate

**\*\***

*BE15-08-13*

Location

Loc Qty

Loc Code

WA003

93

130983

43

133142

20

134415

30

D3458-1

Manufactured

No

110

Each

23.0000

2

8

**\*D3458-1\***

Step Mounting Plate

**\*\***

*BE15-08-10*

Location

Loc Qty

Loc Code

WA003

10

120233

8

122211

2

WA004

13

130460

13

D3458-3

Manufactured

No

110

Each

13.0000

2

8

**\*D3458-3\***

Step Mounting Plate

**\*\***

*BE15-08-10*

Location

Loc Qty

Loc Code

WA003

2

122212

2

WA004

11

130461

11

# Picklist Print

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Page 2

Work Order ID: 135242

**\*135242\***

Parent Item: D2724-042

**\*D2724-042\***

Parent Item Name: 206L Step Assembly, RH

Start Date: 8/6/2015

Required Date: 8/13/2015

Start Qty: 4.00

Required Qty: 4.00

D2734

Manufactured No

160

Each

93.0000

1

4

**\*D2734\***

Step End Plate

**\*\***

BE15-08-12

Location

Loc Qty

Loc Code

WA003

93

130983

43

133142

20

134415

30

D2622-120C

Manufactured No

100

Each

88.0000

1

4

**\*D2622-120C\***

Step Extrusion

**\*\***

BE15-08-10

Location

Loc Qty

Loc Code

WA003

88

130161

88

MS20601 AD4W2

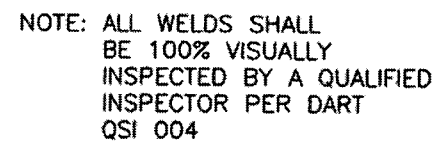
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BE15-08-13

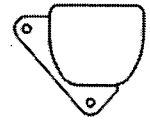
B 132283

**DART**

RELEASED  
05.11.14



APPLY BLACK  
ANTI-SKID ON  
- TOP SURFACE  
TO BOTTOM  
OF TOP RADIUS

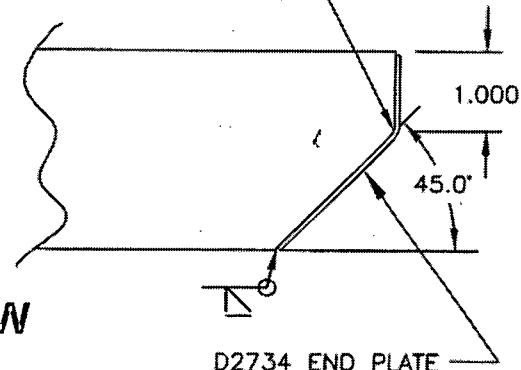


- REFER TO STEP  
END DETAIL

D2724-1  
MAKE FROM EXTRUSION D2622-107

D2724-041 LH STEP ASSEMBLY (SHOWN)  
D2724-042 RH STEP ASSEMBLY (OPPOSITE)

ROUND CORNER OF EXTRUSION TO  
MATCH BEND RADIUS OF END PLATE



### D2721-041/-042 STEP ASSEMBLY PARTS LIST

| QTY<br>- 041 | QTY<br>- 042 | PART NUMBER | DESCRIPTION      |
|--------------|--------------|-------------|------------------|
| X            |              | D2724-041   | LH STEP ASSEMBLY |
|              | X            | D2724-042   | RH STEP ASSEMBLY |
|              |              |             |                  |
| 1            | 1            | D2622-107   | EXTRUSION        |
| 2            | 2            | D2734       | END PLATE        |
| 2            | 2            | D3458-1     | PLATE            |
| 2            | 2            | D3458-3     | PLATE            |

**UNDER REVIEW**

14.12.10 AJS

**D2724-041/-042 STEP ASSEMBLY**

- |    |                                                                                                                                                                        |           |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1) | MAKE FROM EXTRUSION D2622                                                                                                                                              | TYPICAL S |
| 2) | WELD PER DART QSI 004                                                                                                                                                  | NOT       |
| 3) | FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1<br>POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3<br>APPLY BLACK ANTI-SKID PAINT PER DART QSI 005 4.4 |           |
| 4) | ALL DIMENSIONS ARE IN INCHES                                                                                                                                           |           |
| 5) | ALL TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED                                                                                                             |           |

TYPICAL STEP END DETAIL  
NOT TO SCALE



A triangle with the letter 'B' inside it.

3 135242  
30 20150806

|          |                        |                                           |                          |  |
|----------|------------------------|-------------------------------------------|--------------------------|--|
| DESIGN   | DRAWN BY               |                                           | DART AEROSPACE USA, INC. |  |
| KE       | PH                     |                                           | PORT HADLOCK, WA         |  |
| CHECKED  | APPROVED               | DRAWING NO.                               | REV. C                   |  |
| #        | #                      | D2724                                     | SHEET 1 OF 1             |  |
| DATE     | TITLE                  |                                           | SCALE                    |  |
| 05.09.19 | 206L/407 STEP ASSEMBLY |                                           | NTS                      |  |
| A        | 97.12.04               | NEW ISSUE                                 |                          |  |
| B        | 98.10.19               | UPDATED WELD DETAIL<br>REVISED TOLERANCES |                          |  |
| C        | 05.09.19               | RE-DESIGN, ADD D3458-1/-3                 |                          |  |



NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: Aut Date: 15/08/24QA Closed: PM Date: 15/08/24

|                           |                                                                                                                                                                                        |                                        |                                    |                                              |                                                 |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|-------------------------------------------------|
| Work Order: <u>135242</u> | <b>DISPOSITION</b><br>Rework <input checked="" type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b>      |                                    |                                              |                                                 |
| Part No. <u>02724-042</u> |                                                                                                                                                                                        | Skid-tube <input type="checkbox"/>     | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/>           | Engineering <input checked="" type="checkbox"/> |
| NCR No. <u>15-5265</u>    |                                                                                                                                                                                        | Machining <input type="checkbox"/>     | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/>   | Quality <input type="checkbox"/>                |
|                           |                                                                                                                                                                                        | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>                  |
|                           |                                                                                                                                                                                        | Large Fab <input type="checkbox"/>     | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/>            |                                                 |

| Root Cause    | Date                                | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description                 | Sign & Date | Verification | QC Inspector |
|---------------|-------------------------------------|------|-----|-----------------------------------------------------|-------------------|------------------------------------|-------------|--------------|--------------|
| Doc/Data      | 15.08.06                            |      | 4   | DRAWING U.P. TO ADD JENT HOLE FOR WELDING           | A.P               | ACCEPTABLE PER PRELIM DEC ATTACHED | 15-08-13    | DAS 9 9-89   | DAS 9 9-89   |
| Equip/Tooling |                                     | 10   |     | UNDER REVIEW                                        |                   |                                    |             | 15-08-13     | 15-08-13     |
| Operator      |                                     |      |     |                                                     |                   |                                    |             |              |              |
| Material      |                                     |      |     |                                                     |                   |                                    |             |              |              |
| Setup         |                                     |      |     |                                                     |                   |                                    |             |              |              |
| Other         |                                     |      |     |                                                     |                   |                                    |             |              |              |
| Process       |                                     |      |     |                                                     |                   |                                    |             |              |              |
| Supplier      |                                     |      |     |                                                     |                   |                                    |             |              |              |
| Training      |                                     |      |     |                                                     |                   |                                    |             |              |              |
| Unapproved    | <input checked="" type="checkbox"/> |      |     |                                                     |                   |                                    |             |              |              |

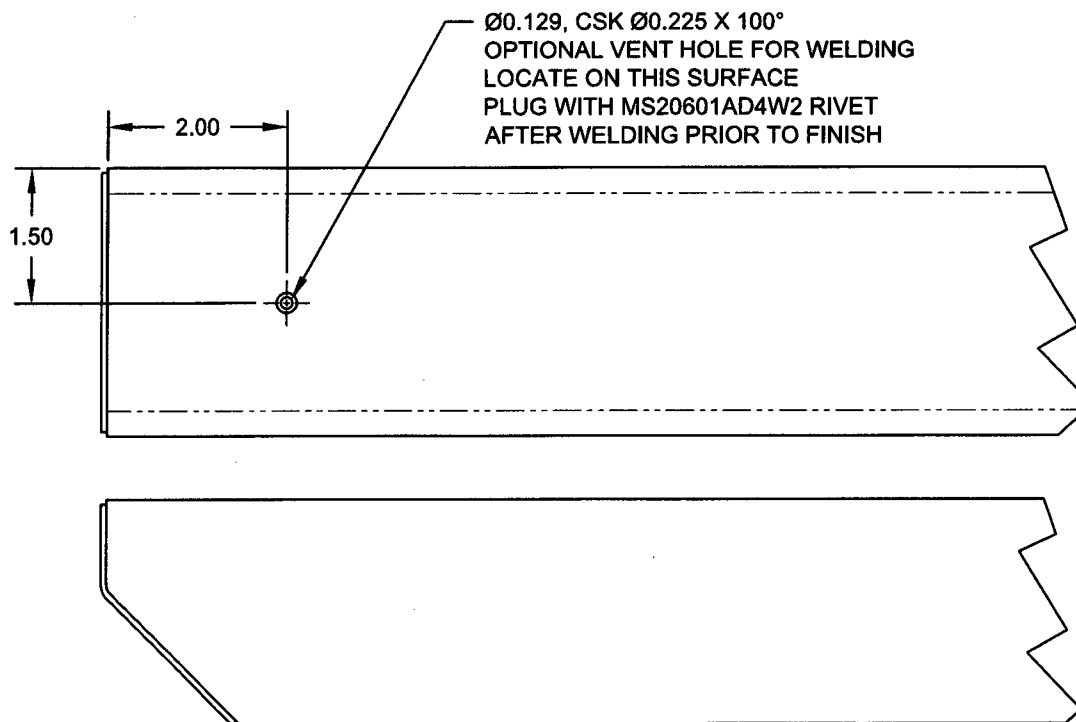
## FAULT CATEGORY

| Landing Gear                                          | General                                     |                                                          |                                               |
|-------------------------------------------------------|---------------------------------------------|----------------------------------------------------------|-----------------------------------------------|
| <input type="checkbox"/> Bending                      | <input type="checkbox"/> Bend               | <input type="checkbox"/> Grain                           | <input type="checkbox"/> Ovalized             |
| <input type="checkbox"/> Centre Not Concentric to O/S | <input type="checkbox"/> BOM/Route          | <input type="checkbox"/> Hardware                        | <input type="checkbox"/> Over/Under tolerance |
| <input type="checkbox"/> Cracks                       | <input type="checkbox"/> Broken/Damaged     | <input type="checkbox"/> Inspection Incomplete           | <input type="checkbox"/> Part Incorrect       |
| <input type="checkbox"/> Crushed/Crimped              | <input type="checkbox"/> Burrs              | <input type="checkbox"/> Instructions Incomplete/Unclear | <input type="checkbox"/> Part Lost/Missing    |
| <input type="checkbox"/> Cuffs                        | <input type="checkbox"/> Contamination      | <input type="checkbox"/> Maintenance                     | <input type="checkbox"/> Part Moved           |
| <input type="checkbox"/> Heat Treat                   | <input type="checkbox"/> Countersink        | <input type="checkbox"/> Mislabeled                      | <input type="checkbox"/> Positioned Wrong     |
| <input type="checkbox"/> Inspection Strip in Tube     | <input type="checkbox"/> Cut Too Short      | <input type="checkbox"/> Misread                         | <input type="checkbox"/> Power Loss/Surge     |
| <input type="checkbox"/> Ripples in Bend              | <input type="checkbox"/> Drill Holes        | <input type="checkbox"/> Offset                          | <input type="checkbox"/> Pressure/Forced      |
| <input type="checkbox"/> Torque Waves in Extrusion    | <input checked="" type="checkbox"/> Drawing | <input type="checkbox"/> Out of Calibration              | <input type="checkbox"/> Temperature/Cure     |
| <input type="checkbox"/> Turning Sequence             | <input type="checkbox"/> Finish             | <input type="checkbox"/> Out of Sequence                 | <input type="checkbox"/> Weld                 |
| <input type="checkbox"/> Wave/Twist in Tube           | <input type="checkbox"/> Folio              | <input type="checkbox"/> Outside Dimensions              | <input type="checkbox"/> Wrong Stock Pulled   |
|                                                       |                                             |                                                          | <input type="checkbox"/> Other                |

|                      |                                 |          |                                         |  |                         |                           |              |
|----------------------|---------------------------------|----------|-----------------------------------------|--|-------------------------|---------------------------|--------------|
| DRAWING NO.<br>D2724 | TITLE<br>206L/407 STEP ASSEMBLY | REV. PC1 | DART AEROSPACE LTD<br>ENGINEERING ORDER |  | D.E.O. NO.<br>D2724-C-1 | SHEET NO.<br>SHEET 1 OF 1 | SCALE<br>NTS |
| DRAWN<br>AJS         |                                 | CHECKED  | MFG. APPR.                              |  | APPROVED                | DE APPR.                  |              |
| DATE<br>14.12.09     |                                 | DATE     | DATE                                    |  | DATE                    | DATE                      |              |

REF PAR 14-355

ADD VENT HOLE AND MS20601AD4W2 RIVET AS SHOWN BELOW:



**PRELIMINARY ISSUE**  
AJS 14.12.09

ADD MS20601AD4W2 RIVET TO PARTS LIST AND CORRECT TYPO AS SHOWN:

IS: D2724-041/-042 STEP ASSEMBLY PARTS LIST

WAS: D2721-041/-042 STEP ASSEMBLY PARTS LIST

| QTY<br>-041 | QTY<br>-042 | PART NUMBER  | DESCRIPTION      |
|-------------|-------------|--------------|------------------|
| X           |             | D2724-041    | LH STEP ASSEMBLY |
|             | X           | D2724-042    | RH STEP ASSEMBLY |
| 1           | 1           | D2622-107    | EXTRUSION        |
| 2           | 2           | D2734        | END PLATE        |
| 2           | 2           | D3458-1      | PLATE            |
| 2           | 2           | D3458-3      | PLATE            |
| ADD: —      | 1           | MS20601AD4W2 | RIVET (OPTIONAL) |

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